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APPLICATION NO.	FILING DA	ATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/815,626	04/02/2004		Kia Silverbrook	HYT003US	9656	
24011	7590 0	3/20/2006		EXAMINER		
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393 DARLI BALMAIN,	NG STREET NSW 2041			ART UNIT	PAPER NUMBER	
AUSTRALI				2876		
				DATE MAILED: 03/20/200	6	

Please find below and/or attached an Office communication concerning this application or proceeding.

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		Applicatio	n No.	Applicant(s)				
		10/815,626	5	SILVERBROOK ET AL.				
	Office Action Summary	Examiner		Art Unit				
		April A. Tay		2876				
Period f	The MAILING DATE of this communication ap or Reply	pears on the	cover sheet with the c	orrespondence add	Iress	-		
A SH WHI - Exte afte - If N - Fail Any	HORTENED STATUTORY PERIOD FOR REPLICATION OF THE MAILING DEPLICATION OF THE	DATE OF THI 136(a). In no ever will apply and will e, cause the applic	S COMMUNICATION It, however, may a reply be time expire SIX (6) MONTHS from the sation to become ABANDONE	J. ely filed the mailing date of this cor D (35 U.S.C. § 133).	,			
Status								
1)[🛛	Responsive to communication(s) filed on <u>02</u> A	Anril 2004						
2a)□								
3)	, <u> </u>							
	closed in accordance with the practice under	•	•					
Disposit	ion of Claims							
5)□ 6)⊠ 7)⊠ 8)□ Applicat	Claim(s) are subject to restriction and/o	awn from con ted. ected to. or election re						
9)🛛	The specification is objected to by the Examine	er.			•			
10)	The drawing(s) filed on is/are: a) acc	cepted or b)	\cline{eta} objected to by the E	xaminer.				
	Applicant may not request that any objection to the							
44)[Replacement drawing sheet(s) including the correct		-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		` '			
11)	The oath or declaration is objected to by the E	xaminer. Not	e the attached Office	Action or form PT0	D-152.			
Priority	under 35 U.S.C. § 119							
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 								
2) 🔲 Notio 3) 🔲 Infor	et(s) ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PTO-948) ce of Draftsperson's Patent Drawing Review (PTO-948) ce No(s)/Mail Date) !	1) Interview Summary (Paper No(s)/Mail Da 5) Notice of Informal Pa 5) Other:	te	152)			

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

- 2. The disclosure is objected to because of the following informalities: The copending applications are listed with the attorney document numbers, which should be change to US application numbers (see pages 1 and 2). Appropriate correction is required.
- 3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claims 1-74 are objected to because of the following informalities:

Re claim 1: Substitute "adapted to scan" with -- for scanning -- (see line 1).

Re claim 2: Substitute "adapted to convey" with -- for conveying -- (see line 1).

Re claim 7: Substitute "the processor" with -- a processor -- (see line 2).

Re claim 9: Substitute "the processor" with -- a processor -- (see line 1).

Re claim 11: Substitute "the processor" with -- a processor -- (see line 1).

Re claim 12: Substitute "the processor" with -- a processor -- (see line 1).

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Re claim 14: Substitute "the processor" with -- a processor -- (see line 1).

Re claim 14: Substitute "is adapted to use" with -- uses -- (see line 1).

Re claim 18: Substitute "the processor" with -- a processor -- (see line 2).

Re claim 19: Substitute "the processor" with -- a processor -- (see line 2).

Re claim 24: Substitute "the processor" with -- a processor -- (see line 4).

Re claim 26: Substitute "the laser" with -- a laser -- (see line 2).

Re claim 36: Substitute "is adapted to sense" with -- senses -- (see line 1).

Re claim 37: Substitute "being adapted to detect" with -- detects -- (see line 1).

Re claim 38: Substitute "the processor" with -- a processor -- (see line 1).

Re claim 38: Delete the terms "is adapted to" (see line 1).

Re claim 38: Substitute "determine" with -- determines -- (see lines 2 and 3).

Re claim 38: Substitute "activate" with -- activates -- (see line 4).

Re claim 39: Substitute "centre" with -- center -- (see line 3).

Re claim 40: Substitute "is adapted to distinguish" with -- distinguishes -- (see line 2).

Re claim 48: Substitute "centre" with -- center -- (see line 4).

Re claim 50: It is unclear to the examiner to what the term "its" refers to (see line 2).

Re claim 54: Substitute "the entire product surface" with -- an entire product surface -- (see lines 3, 7, 11 and 15).

Re claim 54: Substitute "the packaging" with -- a packaging -- (see lines 4, 8, 12 and 16).

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Re claim 54: Substitute "the label" with -- a label -- (see lines 5, 9, 13 and 17).

Re claim 55: Substitute "the check-out" with -- the automated checkout -- (see line 2).

Re claim 55: Substitute "adapted to convey" with -- for conveying -- (see line 3).

Re claim 56: Substitute "the check-out" with -- the automated checkout -- (see line 3).

Re claim 56: Insert a semi-colon after the term "spectrum" (see line 5).

Re claim 56: Delete the terms "adapted to" (see line 6).

Re claim 57: Substitute "adapted to convey" with -- that conveys -- (see line 2).

Re claim 57: Insert -- having -- after "the conveyor" (see line 2).

Re claim 57: Delete "to" (see line 3).

Re claim 63: Substitute "check-out" with -- automated checkout -- (see lines 1 and 2).

Re claim 64: Substitute "check-out" with -- automated checkout -- (see line 1).

Re claim 64: Substitute "is adapted to store" with -- stores -- (see line 1).

Re claim 65: Substitute "check-out" with -- automated checkout -- (see line 1).

Re claim 65: Substitute "adapted to communicate" with -- that communicates -- (see lines 1 and 2).

Re claim 65: Substitute "being adapted to send" with -- sends -- (see line 2).

Re claim 66: Substitute "the check-out" with – the automated checkout -- (see line 2).

Re claim 68: Substitute "adapted to scan" with -- for scanning -- (see lines 1-2).

Re claim 68: It is unclear to the examiner to what the term "it" refers to (see line 8).

Re claim 69: Substitute "adapted to scan" with -- for scanning -- (see line 2).

Re claim 70: Substitute "adapted to scan" with -- for scanning -- (see line 2).

Re claim 71: Substitute "adapted to scan" with -- for scanning -- (see line 2).

Re claim 72: Substitute "adapted to scan" with -- for scanning -- (see lines 1-2).

Re claim 72: Substitute "adapted to be held" with -- for being held -- (see line 6).

Re claim 72: It is unclear to the examiner to what the term "it" refers to (see line

9).

Re claim 73: Substitute "adapted to read" with -- for reading -- (see line 1).

Re claim 74: Substitute "adapted to read" with -- for reading -- (see line 1).

Re claim 74: Substitute "adapted to be held" with -- for being held -- (see line 6).

Re claim 74: It is unclear to the examiner to what the term "it" refers to (line 7).

Appropriate correction is required.

Claim 67 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 3-5, 7-10, 19-21, 23-37, and 52-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Bridgelall et al (US 6,330,973) (hereinafter Bridgelall).

Re claim 1: Bridgelall teaches a scanning device for scanning an interface surface provided on a product item, the scanning device having a beam generator for generating at least one scanning beam having a predetermined spectrum; at least one beam controller for directing the at least one scanning beam into the sensing region through a scanning surface; a sensor for sensing at least some of the coded data on the interface surface of the product item; and generate product identity data (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 2: Bridgelall teaches wherein the scanning surface is formed from a conveyor that conveys the product item through the sensing region, the conveyor having at least one portion that is substantially transmissive to at least a portion of the predetermined spectrum (see col. 14, line 35 to col. 16, line 59).

Re claims 3, 4, 58, and 59: Bridgelall teaches wherein the transmissive portion is formed from a mesh, and wherein the scanning beam passes through apertures in the mesh (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 5: Bridgelall teaches wherein the transmissive portion is formed from material that is substantially transparent to at least a portion of the predetermined spectrum (see col. 14, line 35 to col. 16, line 59).

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Re claim 7: Bridgelall teaches wherein the coded data encodes an EPC associated with the product item, and wherein a processor determines the EPC (see col. 13, line 24+; and col. 18, line 46 to col. 19, line 50).

Re claim 8: Bridgelall teaches wherein the product identity data distinguishes the product item from every other product item (see col. 14, line 35 to col. 16, line 59, col. 18 to col. 19).

Re claims 9 and 10: Bridgelall teaches wherein a processor generates scan data representing the identity of the scanned product item (see col. 14, line 35 to col. 16, line 59, col. 18 to col. 19).

Re claim 19: Bridgelall teaches wherein the interface surface includes at least one region, the region including coded data indicative of an identity of the region, and wherein a processor determines the identity of the at least one region from at least some of the sensed coded data (see col. 14, line 35 to col. 16, line 59, col. 18 to col. 19).

Re claim 20: Bridgelall teaches wherein the at least one region includes at least one coded data portion, and wherein the coded data portion is indicative of the region identity (see col. 14, line 35 to col. 16, line 59, col. 18 to col. 19).

Re claim 21: Bridgelall teaches wherein the at least one region represents a user interactive element (see col. 14, line 35 to col. 16, line 59, col. 18 to col. 19).

Re claim 23: Bridgelall teaches wherein the scanning device includes at least one deflector for deflecting the scanning beam in first and second orthogonal directions

to thereby generate a raster scan pattern over a scanning patch (col. 17, line 5+; col. 20, lines 7-18).

Re claim 24: Bridgelall teaches wherein the coded data includes at a plurality of locations on the interface surface, a corresponding plurality of coded data portions, each coded data portion being indicative of an identity of the interface surface and the position of the coded data portion on the interface surface, and wherein a processor uses the sensed coded data portion to thereby:

- i) determine the identity of the interface surface;
- ii) determine position data representing a position of the sensed coded data portion on the interface surface;
- iii) determine a description of the interface surface using the determined identity; and
- iv) identify the at least one region from the description and the position data. (See col. 14, line 35 to col. 16, line 59, col. 18 to col. 19)

Re claim 25: Bridgelall teaches wherein the at least one deflector includes resonant scanning mirrors (see col. 10, line 40 to col. 11, line 63; and col. 17, line 5+).

Re claim 26: Bridgelall teaches wherein the scanning device includes an amplitude modulator positioned between a laser and the at least one deflector for modulating the amplitude of the scanning beam (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 27: Bridgelall teaches wherein the scanning device determines from radiation sensed by the senor, using the modulation of the scanning beam, ambient light

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incident on the sensor; determines from radiation sensed by the sensor, using the determined ambient light incident on the senor, the radiation reflected from the interface surface; and senses the coded data from the radiation reflected from the interface surface (see col. 10, line 40 to col. 11, line 63).

Re claim 28: Bridgelall teaches wherein the scanning device includes a focusing element positioned between the amplitude modulator and the at least one deflector for focusing the beam (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 29: Bridgelall teaches wherein the scanning device includes a bandpass filter for filtering radiation incident on the sensor (see col. 11, line 9).

Re claims 30 and 31: Bridgelall teaches wherein at least one beam controller directs the at least one scanning beam along at least a selected one of a number of patch beam paths into the sensing region; and wherein each patch beam path extends into the sensing region at a respective angle (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 32: Bridgelall teaches wherein the angle between respective patch beam paths can be a variety of different angles (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 33: Bridgelall teaches wherein the beam controller includes at least one mirror for directing the scanning beam along a selected one of the patch beam paths (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 34: Bridgelall teaches wherein the beam controller includes a first mirror; a plurality of second mirrors; and a controller which controls the position of the

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first mirror to thereby reflect the scanning beam from a selected one of the second mirrors into the sensing region (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 35: Bridgelall teaches wherein each second mirror defines at least one patch beam path, and wherein the controller controls the position of the first mirror to thereby direct the scanning beam along a selected patch beam path (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 36: Bridgelall teaches wherein the sensor senses radiation reflected from the product item along the selected patch beam path (see col. 10, line 40 to col. 11, line 63; col. 17, line 5+).

Re claim 37: Bridgelall teaches wherein the scanning device detects the presence of a plurality of product items in the sensing region (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 52: Bridgelall teaches wherein the scanning device senses coded data from the interface surfaces of a number of product items substantially simultaneously (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 53: Bridgelall teaches wherein the scanning device further includes a memory (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 54: Bridgelall teaches wherein the coded data is disposed over at least one of an entire product surface; a packaging; and a label (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 55: Bridgelall teaches wherein the scanning device is being provided in an automated check-out, the coded data being disposes over a substantial portion of

the interface surface, the automated check-out comprising a conveyor for conveying the product item through the sensing region, wherein the scanning device directs the at least one scanning beam at the sensing region so as to sense at least some of the coded data as the conveyor causes the product item to pass through the sensing region. (See col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 56: Bridgelall teaches an automated check-out comprising a scanning surface being transmissive to radiation of at least a portion of a predetermined spectrum; directing at least one scanning beam having the predetermined spectrum into a sensing region through the scanning surface; sense at least some of the coded data on the interface surface of a product item provided in the sensing region; and generate, using at least some of the sensed coded data, product identity data indicative of the identity of the product item. (See col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 57: Bridgelall teaches wherein the scanning surface is formed from a conveyor that conveys the product item through the sensing region, the conveyor having at least one portion that is substantially transmissive to at least a portion of the predetermined spectrum (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 60: Bridgelall teaches wherein the transmissive portion is formed from material that is substantially transparent to at least a portion of the predetermined spectrum (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claims 61 and 63: Bridgelall teaches wherein the automated checkout includes an alarm for activation in response to the detection of a scanning error, and wherein the alarm is an audible alarm signal (see col. 18, lines 31+).

Re claim 62: Bridgelall teaches wherein the scanning error includes at least sensing the presence of a plurality of product items in the sensing region (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claims 64 and 66: Bridgelall teaches wherein the automated check-out stores scan data indicative of the identity of the product item in memory; and wherein the memory is located in at least one of the automated check-out; and a computer system (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Re claim 65: Bridgelall teaches wherein the automated checkout further includes a communicator for communicating with a computer system at least one of the product identity data; and the scan data (see col. 9 to col. 10; col. 14, line 35 to col. 16, line 59; col. 18 to col. 19).

Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall e al (US 6,330,973) (hereinafter Bridgelall) in view of Outwater et al (US 6,203,069) (hereinafter Outwater). The teachings of Bridgelall have been discussed above.

Bridgelall fails to teach or fairly suggest wherein the coded data is printed on the interface surface in infrared ink, and wherein at least a portion of the predetermined spectrum corresponds to at least a portion of the infrared spectrum.

Outwater teaches a product authentication system comprising a label having a barcode that is printed in infrared ink, and wherein at least a portion of a predetermined spectrum corresponds to at least a portion of the infrared spectrum (see abstract; and col. 4, line 5 to col. 5, line 12). In view of Outwater's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ a reading device for reading a barcode printed in infrared ink, and wherein at least a portion of the predetermined spectrum corresponds to at least a portion of the infrared spectrum to the teachings of Bridgelall in order to secure the data printed on the product and to prevent counterfeiters from reproducing the code.

9. Claims 11, 12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall e al (US 6,330,973) (hereinafter Bridgelall).

Re claim 11: Bridgelall fails to teach or fairly suggest wherein the processor generates the read data if the determined product identity data is different to product identity data determined during previous read events. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ a processor that generates the read data if the determined product identity data

is different to product identity data determined during previous read events in order to prevent a product from being scanned more than once.

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Re claim 12: Bridgelall fails to teach or fairly suggest wherein the processor compares the determined product identity data to previously determined product identity data; and generates read data representing the identity of the product item if the determined product identity data has not been previously determined. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ a processor that compares the determined product identity data to previously determined product identity data; and generates read data representing the identity of the product item if the determined product identity data has not been previously determined in order to prevent a product from being scanned more than once.

Re claim 22: Bridgelall fails to specifically teach or fairly suggest wherein the interface surface is printed using a printer to print the information and coded data. Since Bridgelall does teach a system for reading indicia printed on a product, it is inherent that using a printer prints the indicia on the product.

Re claim 38: Bridgelall fails to teach or fairly suggest wherein the processor activates an alarm if the determined product identity data is indicative of more than one product item. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ a processor that activates an alarm if the determined product identity data is indicative of more than one product item in order to notify the operator that different products have the same product identification.

10. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall et al (US 6,330,973) (hereinafter Bridgelall) in view of Roustaei et al (US 6,685,095) (hereinafter Roustaei). The teachings of Bridgelall have been discussed above.

Bridgelall fails to teach or fairly suggest wherein the coded data is redundantly encoded using Reed-Solomon encoding; wherein the processor uses the redundantly encoded data to detect one or more errors in the coded data; and wherein the reading device corrects the one or more detected errors.

Roustaei teaches an optical code reading system wherein a coded data is redundantly encoded using Reed-Solomon encoding; wherein the processor uses the redundantly encoded data to detect one or more errors in the coded data; and wherein the reading device corrects the one or more detected errors (see abstract; col. 3, line 66 to col. 4, line 16; and col. 4, line 54 to col. 5, line 8). In view of Roustaei's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the well known Reed-Solomon code; and a system for detecting errors in the coded data and correcting the detected errors to the teachings of Bridgelall in order to ensure that the information read from the encoded data is accurate.

Allowable Subject Matter

11. Claims 17, 18, 20, 39-51 and 68-74 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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12. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, taken alone or in combination, fail to teach or fairly suggest, in conjunction with other limitations in the claims, wherein the coded data is indicative of a plurality of reference points; wherein each reference point corresponds to a respective location on the interface surface; and wherein the processor generates position data representing the position of a sensed reference point on the interface surface.

Conclusion

- 13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Iizaka et al (US 5,679,941) discloses a checkout device for a point-of-sale system.
- 14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April A. Taylor whose telephone number is (571) 272-2403. The examiner can normally be reached on Monday Friday from 6:30AM 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [april.taylor@uspto.gov].

All Internet e-mail communications will be made of record in the

application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

06 March 2006

DANIEL STCYR
PRIMARY EXAMINER